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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,338	12/01/2003	Kazi A. Zaman	OIC0185US	5478

60975 7590 02/06/2008

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EXAMINER	
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ART UNIT	PAPER NUMBER
2167	

MAIL DATE	DELIVERY MODE
02/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,338	ZAMAN ET AL.	
	Examiner	Art Unit	
	Michael D. Pham	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-22 and 31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-22 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Status of claims

1. Claims 3, 6, 10, 12, 13, 19-21, and 31 have been amended.

2. Claims 3-22 and 31 are pending.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: what comprises a computer-readable medium is not in the specification.

The phrase "computer-readable medium" is interpreted as a medium not including any form of energy or signals.

Claim Objections

4. Prior objections towards 1, 6, 10, 12, 13, 19, 21 and 31 are withdrawn.

Claim Rejections - 35 USC § 112

5. Claims 3 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 and 31 recite "a method in a computing system for processing

a relational query, comprising ". Applicant appears to be claiming two different statutory classes and one of ordinary skill in the art would not understand which one is which.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 3-18, 21-22, and 31 are rejected under 35 U.S.C. 101 because the language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application produce a concrete, useful, an tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

MPEP 2106.01:

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not

make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Claims 21-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 21 recites "a computing system". However claim 21fails to contain any computer hardware that is used to implement the system so as to realize the functionality. Thus the body of claim 21 is merely an abstract idea and is being processed without any links to a practical result in the technology arts and without computer manipulation. Claim 22 fails to resolve the deficiencies of claim 21 and is therefore rejected.

Claims 3-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 3 recites "a method in a computing system for processing a relational query, comprising" However claim 3 fails to contain any computer hardware that is used to implement the system so as to realize its functionality. Thus, the body of claim 3 is merely an abstract idea and is being processed without any links to a practical result in the technology arts and without computer manipulation. Even though it appears to be a method claim, in combination with a system it appears to be software per se. Claims 4-18 fail to resolve the deficiencies of claim 4 and is therefore rejected.

Claim 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 31 recites "a method in a computing system for processing a

relational query, comprising" However claim 31 fails to contain any computer hardware that is used to implement the system so as to realize its functionality. Thus, the body of claim 31 is merely an abstract idea and is being processed without any links to a practical result in the technology arts and without computer manipulation. Even though it appears to be a method claim, in combination with a system it appears to be software per se.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claim 3, 6, 7, 8, 10, 15, 16, 17-22, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0236767 by Soylemez et. al. (hereafter Soylemez) further in view of U.S. Patent Application Publication 2002/0091681 by Cras et. al. (hereafter Cras).**

Claim 3:

Soylemez discloses the following claimed limitations:

"generating a relational model of a multidimensional data source using one or more of a schema for the multidimensional data source and metadata for the multidimensional data source, wherein

the relational model comprises a relational-to-multidimensional mapping between the virtual relational table and the multidimensional data source, and

the schema and metadata are accessed from the multidimensional data source;"[0018, that multidimensional data is stored according to a multidimensional schema that is accessible to a multidimensional database server. 0019, selecting only those cells within the subset that satisfy certain criteria. 0020, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table. Accordingly, generating a relational model (0020, relational structure) of a multidimensional data source (0018, multidimensional data) using one or more of a schema for the multidimensional data source (0018, multidimensional schema) and metadata for the multidimensional data source (0019, certain criteria), wherein: the relational model (0020, relational structure) comprises a relational-to-multidimensional mapping between the virtual relational table (0020, virtual return table) and the multidimensional data source (0018, multidimensional data), and the schema (0018, multidimensional schema) and metadata (0019, certain criteria)are accessed from the multidimensional data source (0018, multidimensional data) is disclosed]

"Forming the relational database query against a relational model of a multidimensional data source" as [[0018] Techniques are provided for efficiently accessing multidimensional data

(relational model of a multidimensional data source) using relational database statements (relational query), such as SQL commands.]

"Receiving the relational database query, the received relational database query being drawn against the relational model of the multidimensional data source" as [[0018] Techniques are provided for efficiently accessing multidimensional data (drawn against relational model of a multidimensional data source) using relational database statements (relational query), such as SQL commands.] ;

"Using the relational-to-multidimensional mapping together with relational/multidimensional equivalency logic to construct a multidimensional database query based on the received relational database query" as [0077, The table function does not completely govern what is returned to the relational database server for complete execution of the query. Hence, relational database server may be requesting data for an application without knowing what data types and in what format the actual returned values will be. Therefore, the multidimensional database server dynamically creates abstract data type definitions (equivalency logic) if necessary to define the data values contained in the virtual return table which were not defined and specified in the table function.]

", wherein the relational/multidimensional equivalency logic comprises a general mapping between relational queries and structures and multidimensional queries and structures" as [0078,The abstract data type definitions are dynamically created as part of the process of fetching and organizing the multidimensional data that is requested in the query based on the nature of the data returned in response to the query. The abstract data type definitions are

returned to the relational database server so that the server can understand and work with the data that is presented in the virtual return table.]

"Submitting the constructed multidimensional database query for execution against the modeled multidimensional data source" as [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement].

Soylemez further discloses a "virtual relational table corresponding to a multidimensional data source" as [0030, virtual return table].

However, Soylemez does not explicitly disclose using "a graphical user interface wherein the graphical user interface is configured to

Display a presentation layer representation" information corresponding to a multidimensional data source and

"Enable pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The

database operates in a computer system and provides returned values responsive to queries. Such a query is generated automatically and deduced from a report definition. Cras discloses 0074, that the report specification is composed of both a tree of reporting elements and a reference to a data source. Cras 0075, discloses user manipulates graphical objects as presented in a graphical user interface, where the objects represent the available data at the datasource. That further in 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report. Hence generating the relevant query depending on where in the report an object is dropped.

Accordingly, Cras discloses "a graphical user interface wherein the graphical user interface is configured to

Display a presentation layer representation" information corresponding to a multidimensional data source [0075, manipulation can be dragging and dropping the graphical objects (gui interface displays a presentation layer) onto the report while the user is building the report (representation information corresponding to multidimensional data source).] and

"Enable pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"[Abstract, built on top of a relational or multidimensional database (one or more tables and columns of data stored in multidimensional data source). Abstract, a query is generated automatically and deduced from a report definition (for database query of). 0075, dragging and dropping (enable pointer-driven selection) the graphical objects (represented as graphical objects).]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report and that a query is automatically generated and deduced from a report definition to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members.

Claim 6:

Soylemez discloses:

"the relational query specifies a detail filter against the relational model, and wherein the constructed multidimensional query specifies that the detail filter be applied to the modeled multidimensional data source" [0049].

However, Soylemez does not explicitly disclose "the graphical user interface is further configured to enable selection of a detail filter to apply against the relational model".

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The database operates in a computer system and provides returned values responsive to queries. Such a query is generated automatically and deduced from a report definition. 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report.

Accordingly, Cras discloses "the graphical user interface is further configured to enable selection of a detail filter" [abstract, query is generated automatically and deduced from a report definition (selection of detail filter). 0075, dragging and dropping graphical objects]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report and that a query is automatically generated and deduced from a report definition to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members.

Claim 7:

Soylemez discloses "wherein the relational query is expressed in SQL, and wherein the detail filter specified by the relational query is an SQL WHERE clause" [0054].

Claim 8:

Soylemez discloses "wherein the relational query specifies an aggregation function against the relational model, and wherein the constructed multidimensional query specifies that the aggregation function be applied to the modeled multidimensional data source" [0006, aggregate functions. 0052 multidimensional database server may determine which cells in the subset satisfy any cell-filtering criteria specified by the query.]

Claim 10:

Soylemez discloses "the relational query specifies a summary filter against the relational model, and wherein the constructed multidimensional query specifies the summary filter be applied to the modeled multidimensional data source" [[0054] In one embodiment, at block 218 a subset of cells (e.g., a sub-cube) is identified, from the data subset, having cells that satisfy dimension-based cell-filtering criteria specified in the query. For example, based on information in the table function parameters (e.g., a LIMIT statement) or in a SQL WHERE clause, particular cells within the subset that are of interest to the query are identified based on dimension-based criteria. Thus, even though a subset of the n-dimensional objects has already been identified based on the

table function, other portions of the database query might further limit the particular cells of interest within the subset]

However does not explicitly disclose "wherein the graphical user interface is further configured to enable selection of a summary filter to apply against the relational model"

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The database operates in a computer system and provides returned values responsive to queries. Such a query is generated automatically and deduced from a report definition. 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report.

Accordingly, Cras discloses "wherein the graphical user interface is further configured to enable selection of a summary filter to apply against the relational model" [abstract, query is generated automatically and deduced from a report definition (selection of a summary filter). 0075, dragging and dropping graphical objects]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report and that a query is

automatically generated and deduced from a report definition to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members.

Claim 15:

Soylemez discloses "Receiving, in response to submitting the multidimensional database query, a multidimensional database query result; and" [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement]

"Using a relational-to-multidimensional mapping contained by the model together with relational/multidimensional equivalency logic to construct a relational database query result based on the received multidimensional database query result." [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement. 0074, an abstract table type (schema) can be defined in the relational database server to describe the virtual return table that is populated by the table function, which describes the "shape" of the result of the table function, e.g., essentially a mapping of source multidimensional data objects to target "rows" (e.g., abstract object types) and "columns" (e.g., attributes of the abstract object types) in the virtual return table (e.g., abstract table type as a collection of abstract object types).]

Claim 16:

The combination of Soylemez and Cras discloses in Soylemez the following:

"Determining that the received relational database query is drawn against both the relational model of the multidimensional data source and one or more native relational tables; and" [0018, accessing multidimensional data using relational database statements, such as SQL commands. To access the data a relational database statement is submitted to a relational database server. The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the statement.]

"Constructing a native relational database query based on aspects of the received relational database query drawn against conventional relational tables; and" [[0020] the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the "virtual return table", to enable the relational database server to access and manipulate the data as if the data resided in a relational table.]

"Submitting the native relational database query for execution against the conventional relational tables," [0018, relational database query is made. 0020, relational database query is sent to virtual table]

"And wherein the constructed multidimensional database query is based on aspects of the received relational database query drawn against the relational model of the multidimensional data source, the method further comprising:

Receiving, in response to submitting the native relational database query, a native relational database query result; and" [[0020] the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the "virtual return table", to enable the relational database server to access and manipulate the data as if the data resided in a relational table.]

However Soylemez does not explicitly disclose "combining the constructed relational database query result with the received native relational database query result in accordance with the received relational database query."

On the other hand, Cras discloses "combining the constructed relational database query result with the received native relational database query result in accordance with the received relational database query."[Cras, 0169, all reporting objects are merged to define the minimal set of queries needed to extract all data needed by all reporting objects. Hence combines constructed relational database queries (e.g. 0168, flattened data source expression results) and native relational database query results (not multi-dimensional expression results)]

It would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of merging query sets to the system of Soylemez in order to improve multidimensional data access and display. As Cras states, 0169, there is thus no need to perform another query that is unnecessary.

Claim 17:

Soylemez discloses "making information about the model available for use in building the received relational database query" [0018]

Claim 18:

Soylemez discloses

"Determining that the received relational database query is drawn against both the relational model of the multidimensional data source and one or more native relational tables; and" [0018, accessing multidimensional data using relational database statements, such as SQL commands. To access the data a relational database statement is submitted to a relational database server. The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the statement.]

"Constructing a native relational database query based on aspects of the received relational database query drawn against conventional relational tables; and" [[0020] the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the "virtual return table", to enable the relational database server to access and manipulate the data as if the data resided in a relational table.]

"Submitting the native relational database query for execution against the conventional relational tables," [0018, relational database query is made. 0020, relational database query is sent to virtual table]

"And wherein the constructed multidimensional database query is based on aspects of the received relational database query drawn against the relational model of the multidimensional data source." [[0020] the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the "virtual return table", to enable the relational database server to access and manipulate the data as if the data resided in a relational table.]

Claim 19:

Soylemez discloses the following claimed limitations:

"a first set of instructions, executable on a processor, configured to generate a relational model of a multidimensional data source using one or moreof a schema for the multidimensional data source and metadata for the multidimensional data source, wherein

the relational model comprises a relational-to-multidimensional mapping between the virtual relational table and the multidimensional data source, and

the schema and metadata are accessed from the multidimensional data source;" ;"[0018, that multidimensional data is stored according to a multidimensional schema that is accessible to a multidimensional database server. 0019, selecting only those cells within the subset that satisfy certain criteria. 0020, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table. Accordingly, a first set of instructions, executable on a processor, configured to generate a relational model (0020, relational structure) of a multidimensional data source (0018,

multidimensional data) using one or more of a schema for the multidimensional data source (0018, multidimensional schema) and metadata for the multidimensional data source (0019, certain criteria), wherein: the relational model (0020, relational structure) comprises a relational-to-multidimensional mapping between the virtual relational table (0020, virtual return table) and the multidimensional data source (0018, multidimensional data), and the schema (0018, multidimensional schema) and metadata (0019, certain criteria)are accessed from the multidimensional data source (0018, multidimensional data) is disclosed]

"a second set of instructions, executable on a processor, configured to form the relational database query against a relational model of a multidimensional data source" as [[0018] Techniques are provided for efficiently accessing multidimensional data (relational model of a multidimensional data source) using relational database statements (relational query), such as SQL commands.]

"a third set of instructions, executable on a processor, configured to receive the relational database query, the received relational database query being drawn against the relational model of the multidimensional data source," [[0018] Techniques are provided for efficiently accessing multidimensional data (drawn against relational model of a multidimensional data source) using relational database statements (relational query), such as SQL commands.]

"a fourth set of instructions, executable on the processor, configured to use the relational-to-multidimensional mapping to translate the received relational database query into a multidimensional database query; and" [0045, At block 204, a subset of data is identified based on the query. For example, the multidimensional database server 106 (FIG. 1) identifies source

data, i.e., a subset of data from the n-dimensional data cube (e.g., n-dimensional analytical workspace data objects), based on a table function. 0077, a table function might have parameters that specify mapping of source multidimensional data to a target virtual return table. 0078,The abstract data type definitions are dynamically created as part of the process of fetching and organizing the multidimensional data that is requested in the query based on the nature of the data returned in response to the query. The abstract data type definitions are returned to the relational database server so that the server can understand and work with the data that is presented in the virtual return table.]

"a fifth set of instructions, executable on the processor, configured to submit the multidimensional database query for execution against the modeled multidimensional data source." [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement]

Soylemez further discloses a "virtual relational table corresponding to a multidimensional data source" as [0030, virtual return table].

However, Soylemez does not explicitly disclose using "a graphical user interface wherein the graphical user interface

Displays a presentation layer representation" information corresponding to a multidimensional data source and

"Enables pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The database operates in a computer system and provides returned values responsive to queries. Such a query is generated automatically and deduced from a report definition. Cras discloses 0074, that the report specification is composed of both a tree of reporting elements and a reference to a data source. Cras 0075, discloses user manipulates graphical objects as presented in a graphical user interface, where the objects represent the available data at the datasource. That further in 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report. Hence generating the relevant query depending on where in the report an object is dropped.

Accordingly, Cras discloses "a graphical user interface wherein the graphical user interface

Displays a presentation layer representation" information corresponding to a multidimensional data source [0075, manipulation can be dragging and dropping the graphical objects (gui interface displays a presentation layer) onto the report while the user is building the report (representation information corresponding to multidimensional data source).] and

"Enables pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"[Abstract, built on top of a relational or multidimensional database (one or more tables and columns of data stored in multidimensional data source). Abstract, a query is generated automatically and deduced from a report definition (for database query of). 0075, dragging and dropping (enable pointer-driven selection) the graphical objects (represented as graphical objects).]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report and that a query is automatically generated and deduced from a report definition to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members.

Claim 20:

Soylemez discloses:

"a fifth set of instructions, executable on the processor, configured to receive, in response to submitting the multidimensional database query, a multidimensional database query result; and" [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement]

"a sixth set of instructions, executable on the processor, configured to use a relational-to-multidimensional mapping to translate the received multidimensional database query result into a relational database query result." [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement. 0074, an abstract table type (schema) can be defined in the relational database server to describe the virtual return table that is populated by the table function, which describes the "shape" of the result of the table function, e.g., essentially a mapping of source multidimensional data objects to target "rows" (e.g., abstract object types) and "columns" (e.g., attributes of the abstract object types) in the virtual return table (e.g., abstract table type as a collection of abstract object types).]

Claim 21:

Soylemez discloses the following claimed limitations:

"a modeling subsystem configured to generate a relational model of a multidimensional data source using one or moreof a schema for the multidimensional data source and metadata for the multidimensional data source, wherein

the relational model comprises a relational-to-multidimensional mapping between the virtual relational table and the multidimensional data source, and

the schema and metadata are accessed from the multidimensional data source;" ;"[0018, that multidimensional data is stored according to a multidimensional schema that is accessible to a multidimensional database server. 0019, selecting only those cells within the subset that satisfy certain criteria. 0020, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table. Accordingly, a modeling subsystem configured to generate a relational model (0020, relational structure) of a multidimensional data source (0018, multidimensional data) using one or more of a schema for the multidimensional data source (0018, multidimensional schema) and metadata for the multidimensional data source (0019, certain criteria), wherein: the relational model (0020, relational structure) comprises a relational-to-multidimensional mapping between the virtual relational table (0020, virtual return table) and the multidimensional data source (0018, multidimensional data), and the schema (0018, multidimensional schema) and metadata (0019, certain criteria)are accessed from the multidimensional data source (0018, multidimensional data) is disclosed]

"a graphical user interface subsystem to form the relational database query against the relational model of the multidimensional data source"[[[0018] Techniques are provided for efficiently accessing multidimensional data using relational database statements, such as SQL commands. Element 312, display (graphical user interface subsystem)]

"A query reception subsystem that receives the relational database query, the received relational database query being drawn against the relational model of the multidimensional data source;" [[0018] Techniques are provided for efficiently accessing multidimensional data using relational database statements, such as SQL commands.]

"A multidimensional query construction subsystem that uses the relational-to-multidimensional mapping to construct a multidimensional database query based on the received relational database query; and" [0020, According to one aspect of the invention, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the "virtual return table", to enable the relational database server to access and manipulate the data as if the data resided in a relational table. 0045, At block 204, a subset of data is identified based on the query. For example, the multidimensional database server 106 (FIG. 1) identifies source data, i.e., a subset of data from the n-dimensional data cube (e.g., n-dimensional analytical workspace data objects), based on a table function. The table function may operate with one or more input parameters that specify (1) the name of the analytic workspace in which the source data (also referred to as data objects and data items) is stored; (2)

the name of a virtual relational table that has been defined to organize the multidimensional data in tabular form; and (3) a mapping of the source data objects to target columns in the table]

"A query submission subsystem that submits the constructed multidimensional database query for execution against the modeled multidimensional data source." [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement]

Soylemez further discloses a "virtual relational table corresponding to a multidimensional data source" as [0030, virtual return table].

However, Soylemez does not explicitly disclose using "the graphical user interface subsystem further displays a presentation layer representation" information corresponding to a multidimensional data source and

"Enables pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The database operates in a computer system and provides returned values responsive to queries.

Such a query is generated automatically and deduced from a report definition. Cras discloses 0074, that the report specification is composed of both a tree of reporting elements and a reference to a data source. Cras 0075, discloses user manipulates graphical objects as presented in a graphical user interface, where the objects represent the available data at the datasource. That further in 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report. Hence generating the relevant query depending on where in the report an object is dropped.

Accordingly, Cras discloses "the graphical user interface subsystem is further configured to display a presentation layer representation" of information corresponding to a multidimensional data source [0075, manipulation can be dragging and dropping the graphical objects (gui interface displays a presentation layer) onto the report while the user is building the report (representation information corresponding to multidimensional data source).] and

"enable pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"[Abstract, built on top of a relational or multidimensional database (one or more tables and columns of data stored in multidimensional data source). Abstract, a query is generated automatically and deduced from a report definition (for database query of). 0075, dragging and dropping (enable pointer-driven selection) the graphical objects (represented as graphical objects).]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report and that a query is automatically generated and deduced from a report definition to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members.

Claim 22:

Soylemez discloses:

"a query result reception subsystem that receives, in response to submitting the multidimensional database query, a multidimensional database query result; and" [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement]

"a relational query result construction subsystem that uses a relational-to-multidimensional mapping contained by the model to construct a relational database query result based on the received multidimensional database query result" [0018, The relational database server communicates with the multidimensional database server to cause the multidimensional database server to extract the multidimensional data required by the relational database server to process the relational database statement. 0074, an abstract table type (schema) can be defined in the relational database server to describe the virtual return table that is populated by the table function, which describes the "shape" of the result of the table function, e.g., essentially a mapping of source multidimensional data objects to target "rows" (e.g., abstract object types) and "columns" (e.g., attributes of the abstract object types) in the virtual return table (e.g., abstract table type as a collection of abstract object types).].

Claim 31:

Soylemez discloses the following claimed limitations:

"generating a relational model of a multidimensional data source using one or moreof a schema for the multidimensional data source and metadata for the multidimensional data source, wherein

the relational model comprises a relational-to-multidimensional mapping between the virtual relational table and the multidimensional data source, and

the schema and metadata are accessed from the multidimensional data source;" ;"[0018, that multidimensional data is stored according to a multidimensional schema that is accessible to a multidimensional database server. 0019, selecting only those cells within the subset that satisfy

certain criteria. 0020, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table. Accordingly, generating a relational model (0020, relational structure) of a multidimensional data source (0018, multidimensional data) using one or more of a schema for the multidimensional data source (0018, multidimensional schema) and metadata for the multidimensional data source (0019, certain criteria), wherein: the relational model (0020, relational structure) comprises a relational-to-multidimensional mapping between the virtual relational table (0020, virtual return table) and the multidimensional data source (0018, multidimensional data), and the schema (0018, multidimensional schema) and metadata (0019, certain criteria)are accessed from the multidimensional data source (0018, multidimensional data) is disclosed]

"Receiving the relational database query, the received relational database query being drawn against both the relational model of a multidimensional data source and a native relational table" as [0018, relational database statements. 0030 relational database server can directly access and operate on data in table 112 and can access and operate on data stored in multidimensional database server.]

"submitting the native relational database query against the native relational table" [0030, During the processing of a relational statement, relational database server can request and receive a set of multidimensional data, such as virtual return table, from multidimensional database server];

"submitting the multidimensional database query against the multidimensional data source" as [0028, Multidimensional database server is able to interpret the multidimensional data which, in one embodiment, is stored as one or more LOBs or BLOBs in database table (muiltidimensional data).]

"Converting the received relational database query into (1) a native relational database query against only the native relational table, and (2) a multidimensional database query against the multidimensional data source" [0030, relational database server comprises a SQL processor that parses, interprets (converts), and manages execution of data queries and/or operations embodied in SQL statements. During the processing of a relational statement the relational server may directly access and operate on data in table 112 (native table). 0028, Multidimensional database server is able to interpret the multidimensional data which, in one embodiment, is stored as one or more LOBs or BLOBs in database table (muiltidimensional data)]

Soylemez further discloses a "virtual relational table corresponding to a multidimensional data source" as [0030, virtual return table].

However, Soylemez does not explicitly disclose using "a graphical user interface wherein the graphical user interface is configured to display a presentation layer representation" information corresponding to a multidimensional data source; "Enable pointer-driven selection

for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer"; and "combining contents of a first search result produced in response to the native relational database query and a second search result produced in response to the multidimensional database query into a third search result responsive to the received relational database query"

On the other hand, Cras discloses, abstract, creating an analytic report on top of a multidimensional data model built on top of a relational or multidimensional database. The database operates in a computer system and provides returned values responsive to queries. Such a query is generated automatically and deduced from a report definition. Cras discloses 0074, that the report specification is composed of both a tree of reporting elements and a reference to a data source. Cras 0075, discloses user manipulates graphical objects as presented in a graphical user interface, where the objects represent the available data at the datasource. That further in 0075, disclosing that such manipulation can be dragging and dropping the graphical objects onto the report while the user is building the report. Hence generating the relevant query depending on where in the report an object is dropped.

Cras further discloses, 0169, logical cubes of all reporting objects are merged, and thus optimized, to defined the minimal set of queries needed to extract all the data needed by all the reporting objects. 0168 discloses Flattening datasource expressions or the cube structure into two dimensions is performed to accommodate data sources which are not multi-dimensional.

Accordingly, Cras discloses "a graphical user interface wherein the graphical user interface is configured to

Display a presentation layer representation" information corresponding to a multidimensional data source [0075, manipulation can be dragging and dropping the graphical objects (gui interface displays a presentation layer) onto the report while the user is building the report (representation information corresponding to multidimensional data source).] and

"Enable pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer;"[Abstract, built on top of a relational or multidimensional database (one or more tables and columns of data stored in multidimensional data source). Abstract, a query is generated automatically and deduced from a report definition (for database query of). 0075, dragging and dropping (enable pointer-driven selection) the graphical objects (represented as graphical objects).]

And Cras discloses "combining contents of a first search result produced in response to the native relational database query and a second search result produced in response to the multidimensional database query into a third search result responsive to the received relational database query." [Cras, 0169, all reporting objects are merged to define the minimal set of queries needed to extract all data needed by all reporting objects. Hence, combines (merges) contents of a first search result produced in response to the native relational database

query(0168, not multi-dimensional expression) and a second search result produced in response to the multidimensional database query (e.g. 0168, flattened data source expression) into a third search result responsive to the received relational database query (Abstract, report definition).]

Both Soylemez and Cras are directed to systems of multidimensional data, and are therefore both within the same field of endeavor. Soylemez discloses providing a display for displaying information to a computer user in order to realize the functionality of the system to the user as seen in element 312 figure 3 and paragraph 0082. Cras discloses in more explicit detail the use of graphical objects in order to create a report and query information as described in detail above. For the above reasons it would have been obvious to one of an ordinary skill in the art to have applied Cras's disclosure of dragging and dropping the graphical objects onto the report while the user is building the report; that a query is automatically generated and deduced from a report definition; and merging report objects to define minimal set of queries (between non multidimensional expressions and multidimensional expressions) to the system of Soylemez in order to provide a more explicit means of communicating to the system the information the user requires. As stated in Cras, 0043, the GUI enables associated dimension objects to be filtered by selected member data so that report data is only replicated for selected members. Thus reducing the amount of queries required of the system. Improving the overall data access.

10. Claims 4-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0236767 by Soylemez et. al. (hereafter Soylemez) further in view of U.S. Patent Application Publication 2002/0091681 by Cras et. al. (hereafter Cras) and U.S. Patent Application Publication 20040039736 by Kilmer et. al. (hereafter Kilmer).

Claim 4:

Soylemez and Cras do not explicitly disclose "wherein the multidimensional query is constructed in MDX."

However, Kilmer discloses 0019, "multi-dimensional expression query statement mdx". It would have been obvious to one of an ordinary skill in the art to apply Su's disclosure of MDX to the combination of Soylemez and Cras for the purpose of being able to talk to the multidimensional data source in a language it would understand. It is further well known in the art that MDX is a standard multidimensional database query language.

Claim 5:

Soylemez discloses "wherein the relational query is expressed in SQL" [0018]

Claim 12:

The combination of Soylemez and Cras disclose the following limitations:

Soylemez discloses "the relational query specifies the detail filter against the relational model having selected predicates, and" [0062]

Cras discloses "the graphical user interface is further configured to enable selection of a detail filter to apply against the relational model, and" [abstract, query is generated

automatically and deduced from a report definition (selection of a summary filter). 0075, dragging and dropping graphical objects]

However Cras and Soylemez do not explicitly disclose "the constructed multidimensional query specifies, for each of the selected predicates that can be applied against the modeled multidimensional data source before a crossjoin operation is performed, applying the selected predicate against the modeled multidimensional data source as early as possible".

On the other hand, Kilmer discloses, "the constructed multidimensional query specifies, for each of the selected predicates that can be applied against the modeled multidimensional data source before a crossjoin operation is performed, applying the selected predicate against the modeled multidimensional data source as early as possible" [0073, the mdx cross join function is used to join the member and expression strings from each dimension strings together (e.g. predicates that can be applied against the modeled multidimensional data source before crossjoin). Then once the member and expression strings have been established for all of the axes, a select clause is built by concatenating the columns and rows strings together.].

Soylemez, Cras, and Kilmer are all within the same field of endeavor, namely multidimensional systems. It would have been obvious to one of an ordinary skill in the art to have applied Kilmer's disclosure of the above for the purpose of help process an MDX query.

Claim 13:

The combination of Soylemez and Cras disclose the following limitations:

Soylemez discloses "the relational query specifies the detail filter against the relational model having selected predicates, and" [0062]

Cras discloses "the graphical user interface is further configured to enable selection of a detail filter to apply against the relational model, and" [abstract, query is generated automatically and deduced from a report definition (selection of a summary filter). 0075, dragging and dropping graphical objects]

However Cras and Soylemez do not explicitly disclose "the constructed multidimensional query specifies, for each of the selected predicates that can be applied against the modeled multidimensional data source before a crossjoin operation is performed, applying the selected predicate against the modeled multidimensional data source before the crossjoin operation is performed."

On the other hand, Kilmer discloses, "the constructed multidimensional query specifies, for each of the selected predicates that can be applied against the modeled multidimensional data source before a crossjoin operation is performed, applying the selected predicate against the modeled multidimensional data source as early as possible" [0073, the mdx cross join function is used to join the member and expression strings from each dimension strings together (e.g. predicates that can be applied against the modeled multidimensional data source before crossjoin). Then once the member and expression strings have been established for all of the axes, a select clause is built by concatenating the columns and rows strings together.].

Soylemez, Cras, and Kilmer are all within the same field of endeavor, namely multidimensional systems. It would have been obvious to one of an ordinary skill in the art to have applied Kilmer's disclosure of the above for the purpose of help process an MDX query.

11. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0236767 by Soylemez et. al. (hereafter Soylemez) further in view of U.S. Patent Application Publication 2002/0091681 by Cras et. al. (hereafter Cras) and "Database Systems: The complete book" by Hector Garcia-Molina (hereafter Garcia-Molina).

Claim 9:

The combination of Soylemez and Cras discloses in Soylemez "wherein the relational query is expressed in SQL, and wherein the aggregation function specified by relational query" [Soylemez, 0018 sql; and further discloses, 0052, determining cell filtering based on Query. 0006, wherein cell values are associated with types of data on which a function is executed, such as a summation, average, minimum value, maximum value, and the like (e.g. "aggregation function specified by relational query")].

However Soylemez and Cras do not explicitly (this is an obvious function in SQL) disclose wherein the aggregation function specified by the relational query "is an SQL GROUP BY clause."

On the other hand, Garcia-Molina discloses that SQL supports grouping, by using a GROUP BY clause [pages 277, 282]. All references are in the same field of endeavor, databases. It would

have been obvious to have applied Garcia-Molina's disclosure above to the combination of Soylemez and Cras for the purpose of grouping tuples together. One of ordinary skill in the art would know this would be a form of filtering.

Claim 11:

The combination of Soylemez and Cras discloses in Soylemez "wherein the relational query is expressed in SQL" [0018, sql], "and wherein the summary filter specified by the relational query" [0054, In one embodiment, at block 218 a subset of cells (e.g., a sub-cube) is identified, from the data subset, having cells that satisfy dimension-based cell-filtering criteria specified in the query.].

However, Soylemez does not explicitly disclose is an "SQL HAVING clause".

On the other hand, Garcia-Molina discloses that SQL supports grouping, by using a GROUP BY clause [pages 277, 282]. All references are in the same field of endeavor, databases. It would have been obvious to have applied Garcia-Molina's disclosure above to the combination of Soylemez and Cras for the purpose of grouping tuples together. One of ordinary skill in the art would know this would be a form of filtering.

12. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0236767 by Soylemez et. al. (hereafter Soylemez) further in view of U.S. Patent Application Publication 2002/0091681 by Cras et. al. (hereafter Cras)

and U.S. Patent Application Publication 20050004904 by Keamey et. al. (hereafter Keamey).

Claim 14:

Cras and Soylemez do not explicitly disclose

"retrieving metadata identifying an aggregation function used for the selected measure of the multidimensional data source;"

"Determining whether the aggregation function identified by the metadata matches the selected aggregation function; and"

"if the aggregation function identified by the metadata matches the selected aggregation function, generating a multidimensional query against the multidimensional data source that relies on the aggregation function performed in the multidimensional data source."

However, Keamey discloses"retrieving metadata identifying an aggregation function used for the selected measure of the multidimensional data source" [abstract, specifies operations according to criteria. 0054 discloses operations are aggregate functions.].

"Determining whether the aggregation function identified by the metadata matches the selected aggregation function; and" [Keamey, Abstract, para. 30-31, matches specified criteria to determine requested operation.]

"if the aggregation function identified by the metadata matches the selected aggregation function, generating a multidimensional query against the multidimensional data source that relies on the aggregation function performed in the multidimensional data source." [Keamey, abstract, performs requested operation.]

Cras, Soylemez, and Keamey are all directed towards multidimensional systems. It would have been obvious to one of an ordinary skill in the art to have applied Keamey's disclosure above, to the combination of Cras and Soylemez for the purpose of describing the correct operations to enact.

Response to Arguments

13. Applicant's arguments filed 11/2/07 have been fully considered but they are not persuasive. .Applicant's assert the followinig:

A. That Soylemez does not disclose generating a relational model of a multidimensional data source using one or more of a schema for the multidimensional data source and metadata for the multidimensional data source, wherein:

the relational model comprises a relational-to-multidimensional mapping between the virtual relational table and the multidimensional data source, and

the schema and metadata are accessed from the multidimensional data source. The reason being that Soylemez fails to provide any indication of from where the input parameters for the table function are provided. There is no indication that these are provided by accessing the multidimensional data source itself.

In response, the examiner respectfully disagrees.

Soylemez discloses 0018, that multidimensional data is stored according to a multidimensional schema that is accessible to a multidimensional database server. 0019,

selecting only those cells within the subset that satisfy certain criteria. 0020, the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table.

Accordingly, generating a relational model (0020, relational structure) of a multidimensional data source (0018, multidimensional data) using one or more of a schema for the multidimensional data source (0018, multidimensional schema) and metadata for the multidimensional data source (0019, certain criteria), wherein:

The relational model (0020, relational structure) comprises a relational-to-multidimensional mapping between the virtual relational table (0020, virtual return table) and the multidimensional data source (0018, multidimensional data), and

The schema (0018, multidimensional schema) and metadata (0019, certain criteria)are accessed from the multidimensional data source (0018, multidimensional data) is disclosed by the cited reference.

In response to there is no indication that these are provided by accessing the multidimensional data source. The examiner respectfully disagrees. Please see 0020, as it states the multidimensional database server places the extracted multidimensional data in a relational structure, referred to herein as the virtual return table, to enable the relational database server to access and manipulate the data as if the data resided in a relational table. Accordingly, it is clear that there is indication that the table functions are provided by accessing a multidimensional data source. Accordingly, applicant's assertions are unpersuasive over the cited references.

B. That Cras does not disclose a graphical user interface. That Cras does not disclose pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer.

In response, the examiner respectfully disagrees. 0075 discluses a graphical user interface. Accordingly, applicant's assertions directed towards graphical user interface are unpersuasive.

In response to Cras does not disclose pointer-driven selection for database query of one or more tables and columns of data stored in the multidimensional data source and represented by the displayed presentation layer, the examiner respectfully disagrees. Cras discloses pointer-driven selection (0075, drag and drop) for database query of one or more tables and columns of data stored in the multidimensional data source (abstract, query is generated automatically) and represented by the displayed presentation layer (0075, report).

Accordingly, applicant's assertions directed towards the cited references are unpersuasive.

Conclusion

14. The prior art made of record listed on PTO-892 and not relied, if any, upon is considered pertinent to applicant's disclosure.

Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Pham whose telephone number is (571)272-3924. The examiner can normally be reached on Monday - Friday 9am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Pham
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